2884-18223

Period 1 CS 3
7 October 1998/V. Paolone

This candidate has 8 measured emulsion tracks from the primary interaction.

	U′	V′	
1)	0.050	-0.063	
2)	0.032	-0.064	
3)	-0.033	0.128	
4)	-0.102	0.059	
5)	-0.081	0.034	
6)	0.041	0.142	$\rightarrow$ 0.041 0.085 (kink occurs in plate 24: $\Delta\theta$ = ~ 57 mr)
7)	-0.083	0.203	
8)	-0.293	-0.137	$\rightarrow$-0.185 -0.158 (kink occurs in plate 26: $\Delta\theta$ = ~ 111 mr)

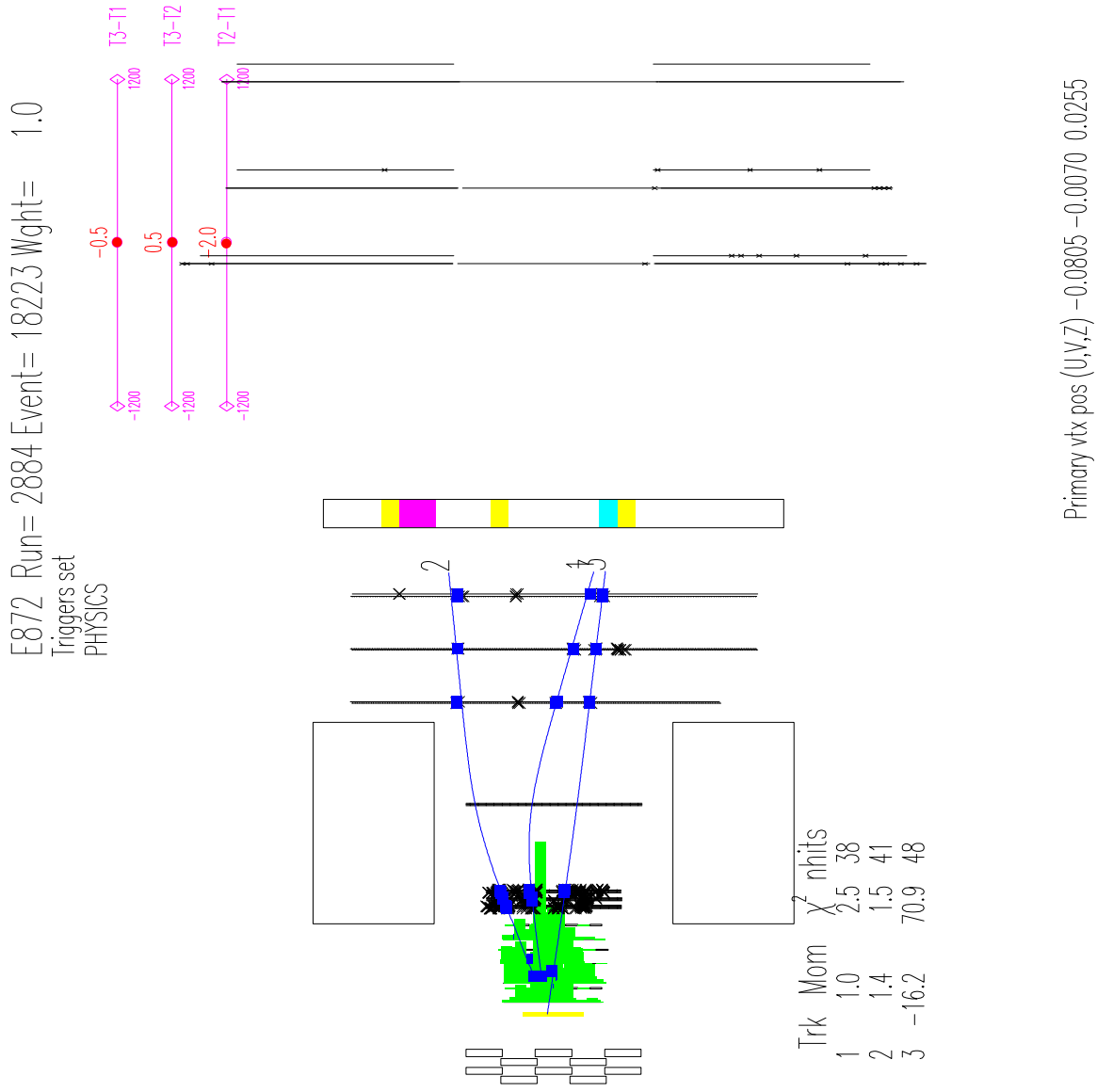
The primary interaction is in module 1/plate 29. The daughter of the kink for emulsion track 8 is missing downstream of module 3, VDC's and DC's. The daughter of the kink for emulsion track 6 is missing downstream of VDC's and DC's.

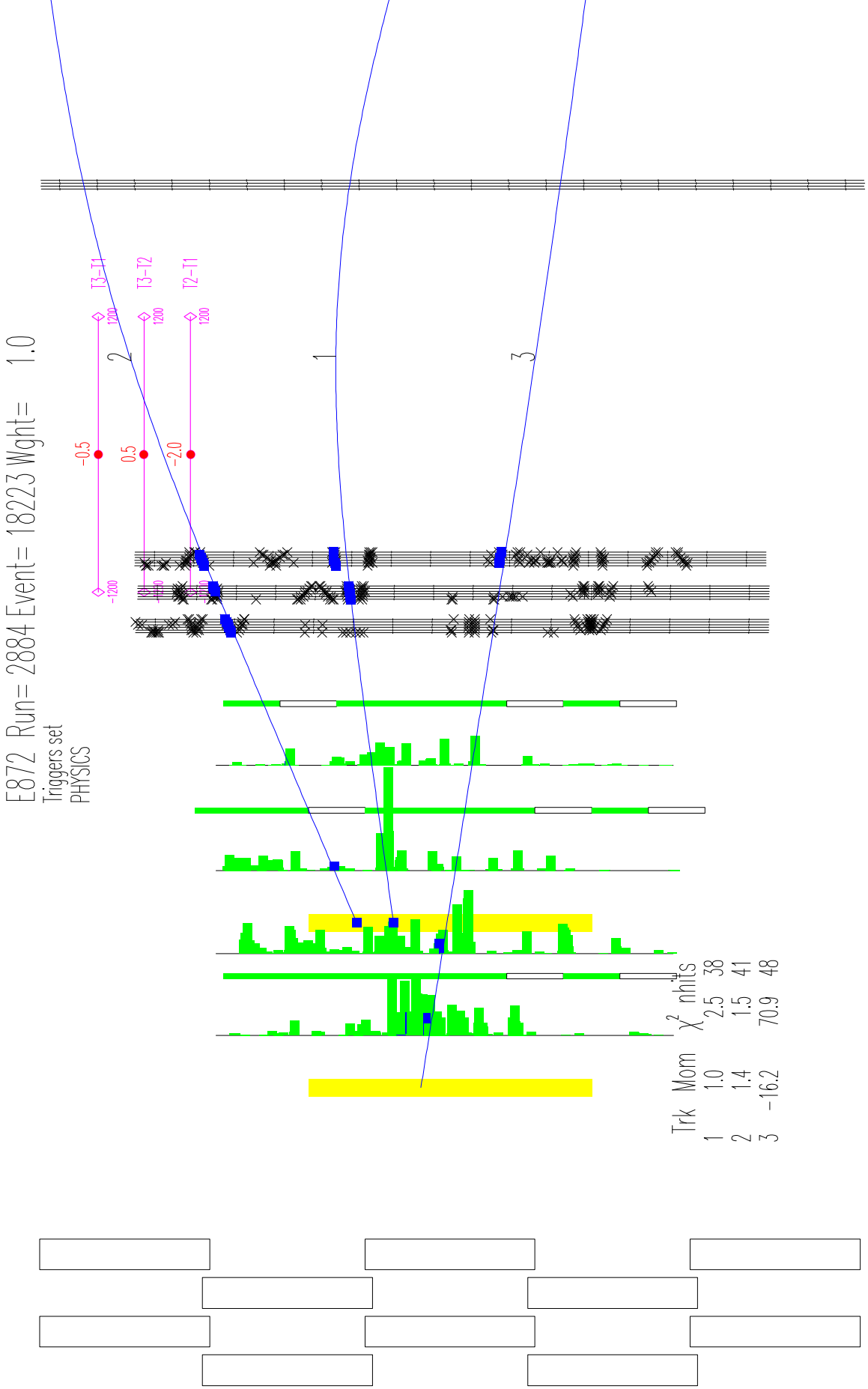
The visible energy is: 10 GeV in the EMCal and three tracks in the downstream chambers of fitted momenta 1.0 GeV (emulsion track # 5), 1.4 GeV (emulsion track # ?) and –16.2 GeV (emulsion track # 1). There is a muon associated with the interaction which matches emulsion track # 1 which has a fitted momentum of –16.2 GeV.

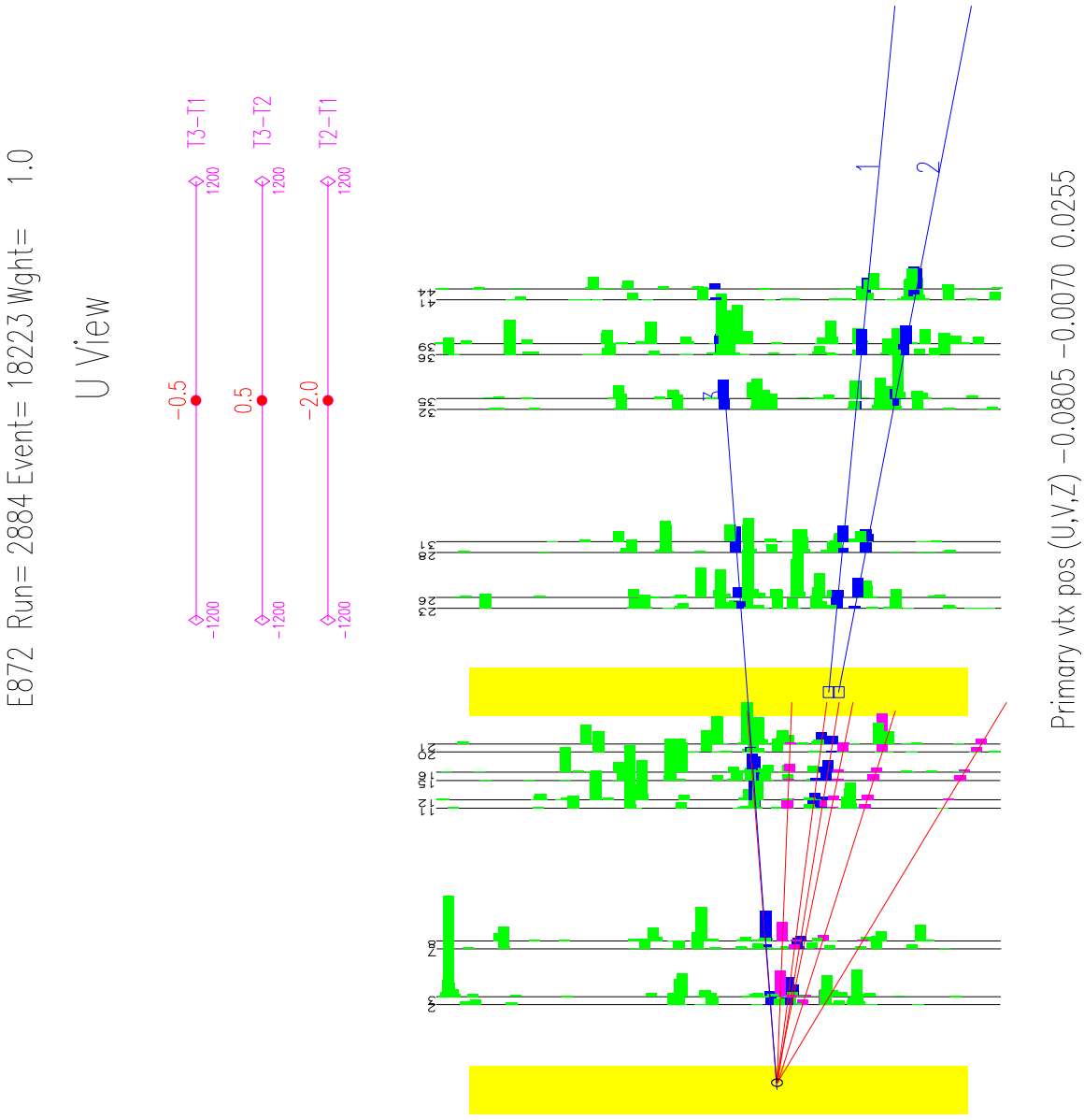
Conclusions:

This event has a linked primary emulsion track IDed as a muon. Therefore this event is no longer a tau neutrino CC interaction candidate. Because there is no evidence of the daughter tracks for both kinks downstream of the magnet an upper limit for the momenta for these tracks of 1 GeV would give a P_T value of 111 MeV and 57 Mev for the decays respectively. Since these are well below 250 MeV this event is no longer a charm decay candidate event.

Plots Included

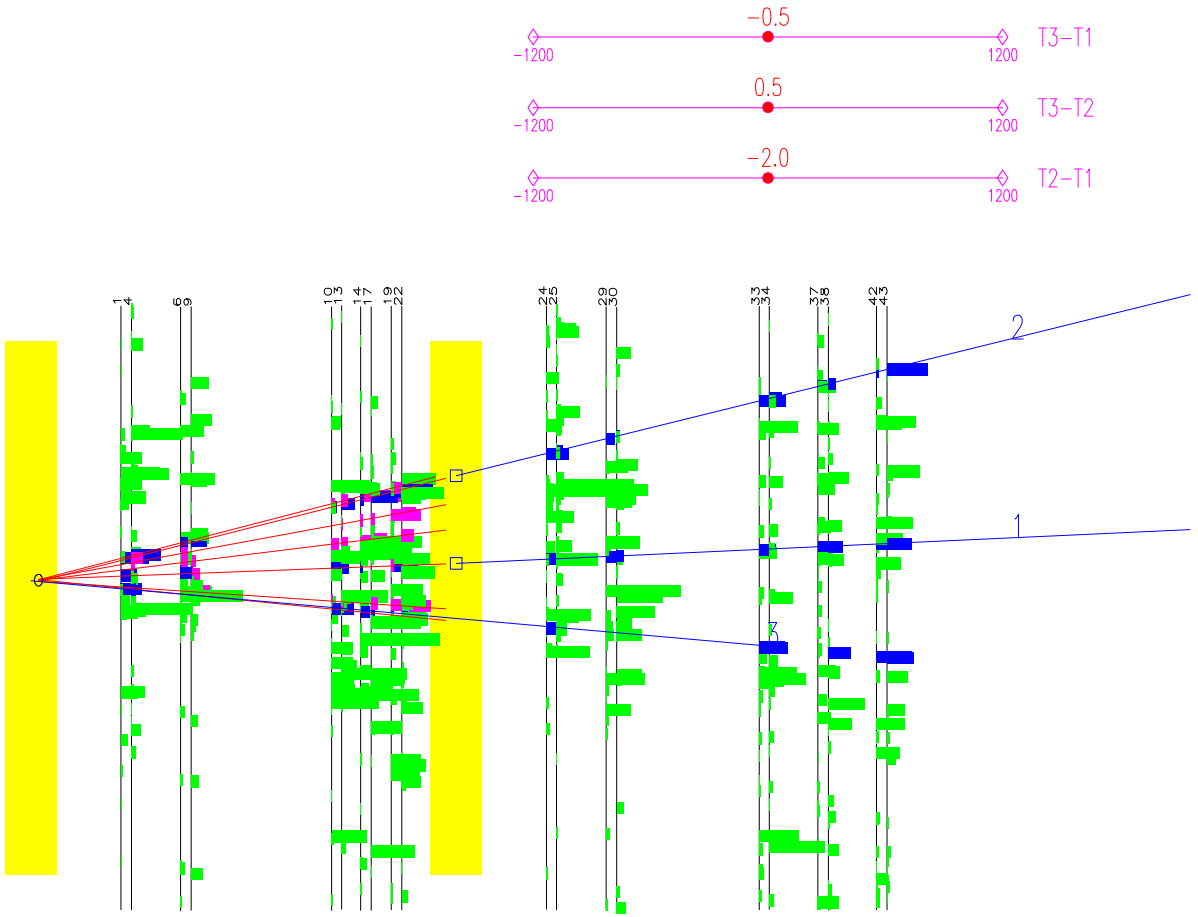



E872 Run= 2884 Event= 18223 Wght= 1.0
Triggers set
PHYSICS
T3-T1
T3-T2
T2-T1
1200
-1200
-0.5
0.5
-2.0
1
2
3
Trk Mom χ² nhits
1 1.0 2.5 38
2 1.4 1.5 41
3 -16.2 70.9 48


E872 Run= 2884 Event= 18223 Wght= 1.0
U View
T3-T1
T3-T2
T2-T1
-0.5
0.5
-2.0
1200
-1200
1
2
Primary vtx pos (U,V,Z) -0.0805 -0.0070 0.0255

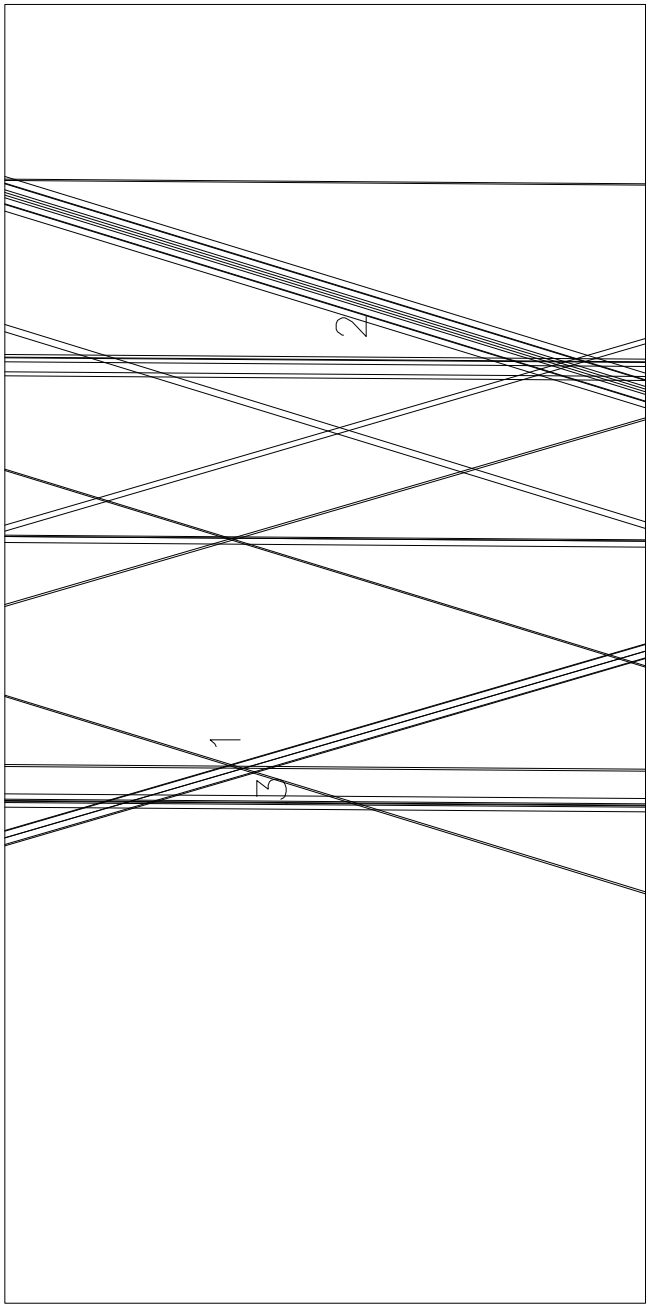
E872 Run= 2884 Event= 18223 Wght= 1.0

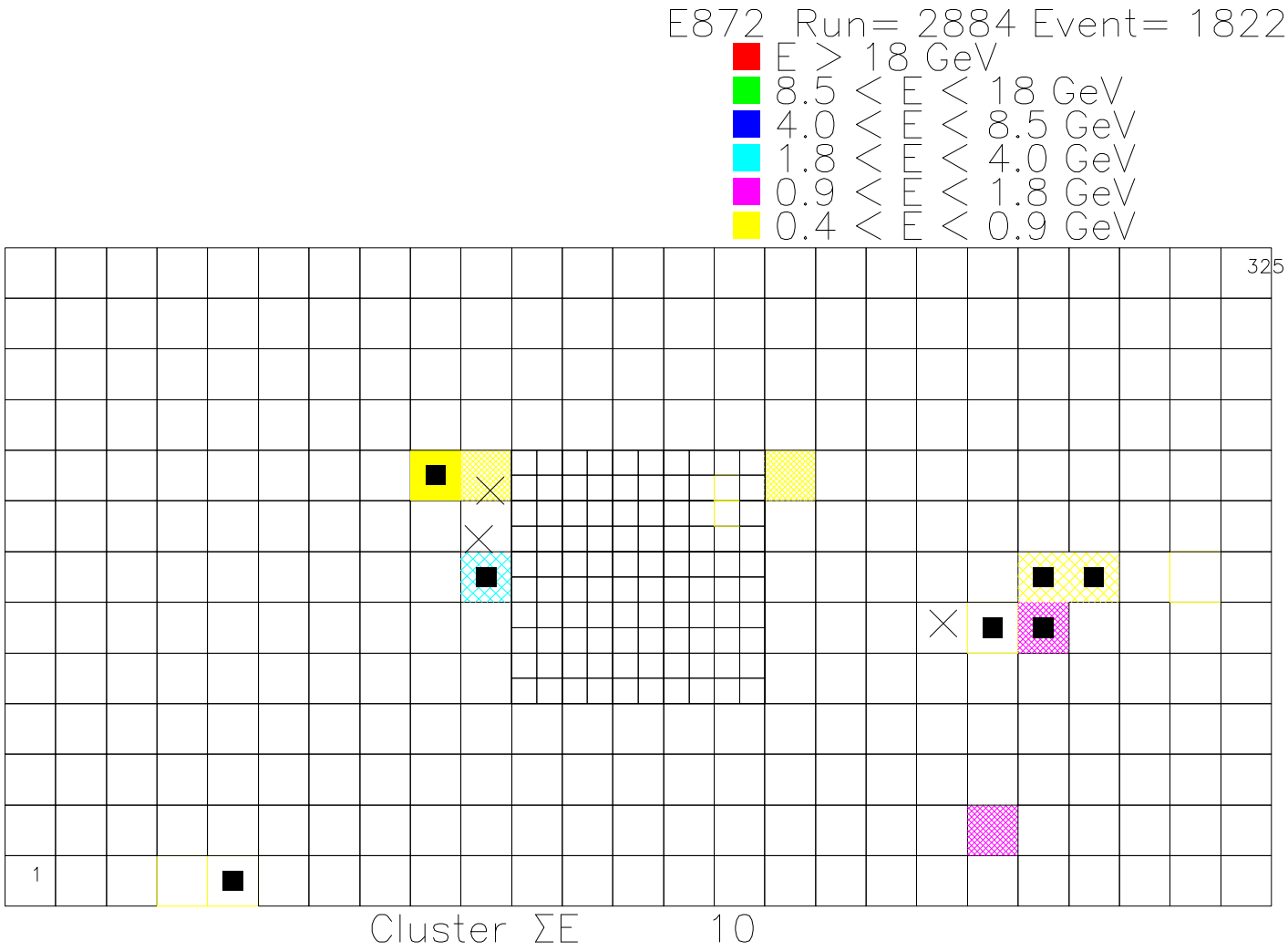
V View

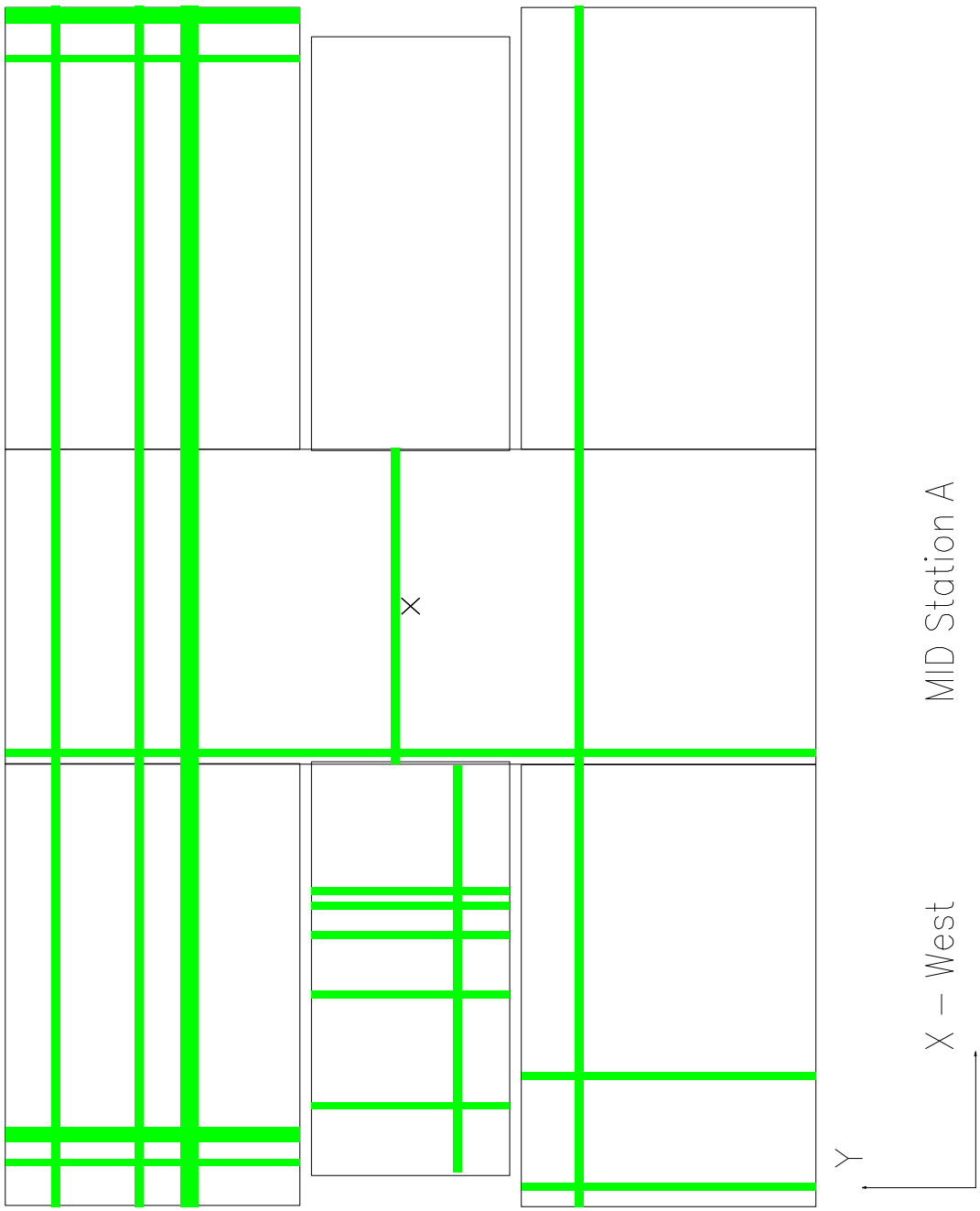


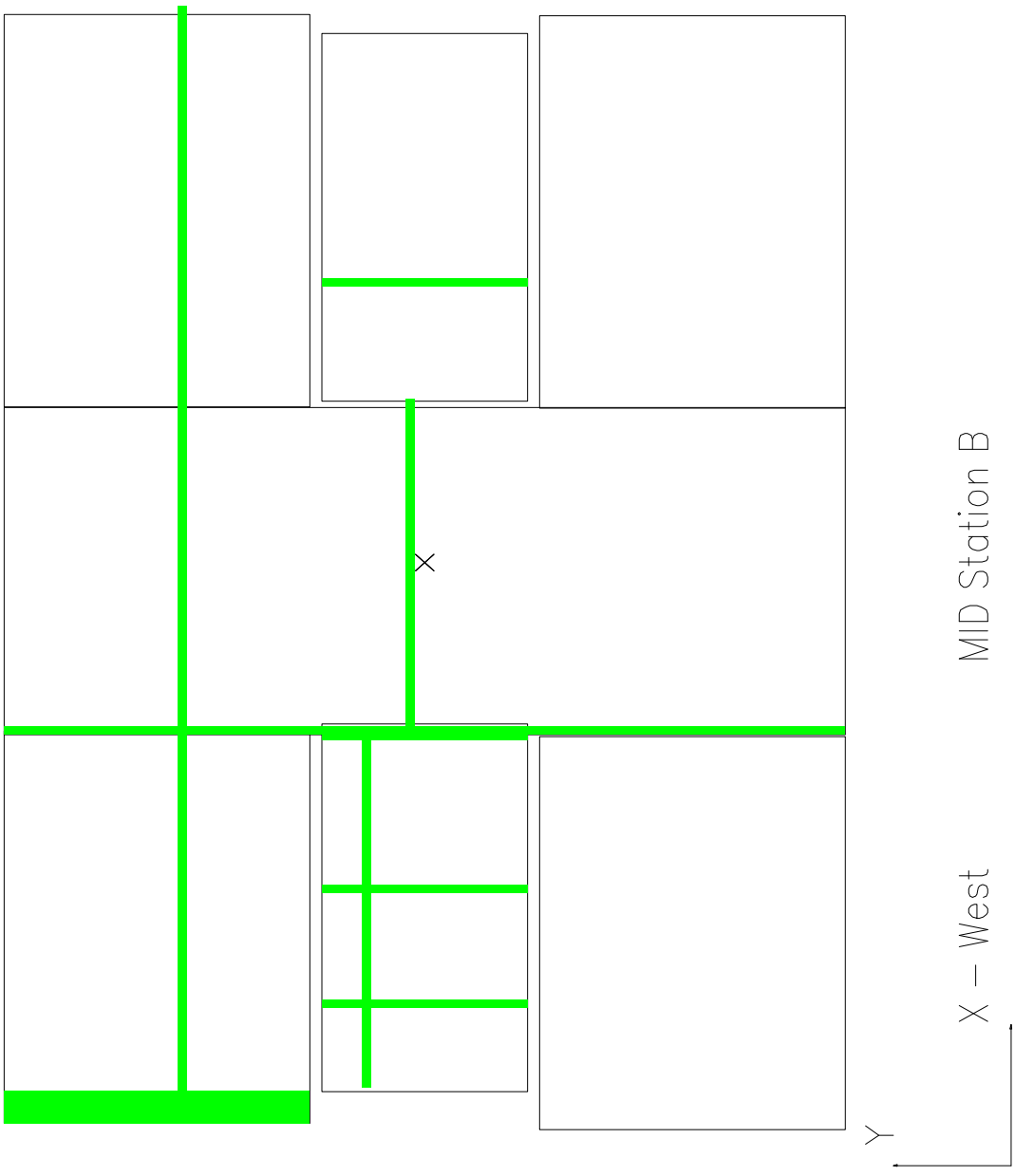
Primary vtx pos (U,V,Z) −0.0805 −0.0070 0.0255

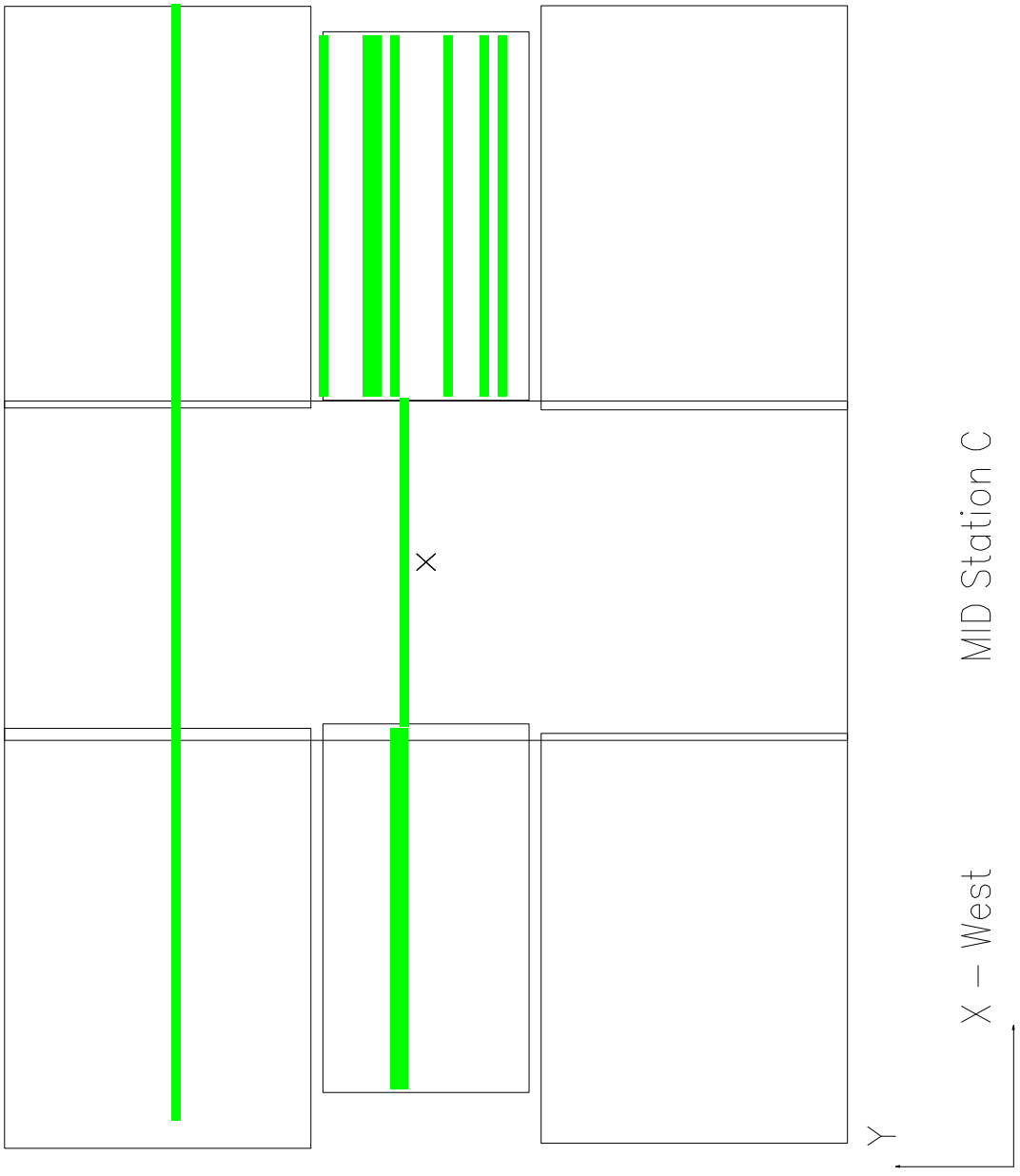
DC 3




E872 Run= 2884 Event= 18223
E > 18 GeV
8.5 < E < 18 GeV
4.0 < E < 8.5 GeV
1.8 < E < 4.0 GeV
0.9 < E < 1.8 GeV
0.4 < E < 0.9 GeV
325
1
Cluster ΣE 10


MID Station A
X – West
Y


MID Station B
X – West
Y


MID Station C
X – West
Y